

CLAIMS:

What is claimed is:

1. A method for managing shared resources in a logical partitioned data processing system, the method comprising:

granting, by a server partition in the logical partitioned data processing system, a logical resource to a client partition in the logical partitioned data processing system, wherein the logical resource corresponds to a physical resource; and

mapping, by the client partition, the logical resource to the physical resource.

2. The method of claim 1, further comprising:

generating an identifier for the logical resource.

3. The method of claim 2, wherein the identifier is unique within the client partition.

4. The method of claim 2, wherein the identifier cannot be used to access the logical resource outside the client partition.

5. The method of claim 1, further comprising:

returning, by the client partition, the logical resource to the server partition.

6. The method of claim 5, further comprising:
rescinding, by the server partition, the logical
resource.
7. The method of claim 1, further comprising:
responsive to a determination, at the server
partition, that the client partition is incapable of
gracefully returning the logical resource, performing a
forced rescind operation.
8. The method of claim 7, further comprising:
preventing translation tables in the client
partition from containing references to a physical
address of the logical resource.
9. The method of claim 1, further comprising:
responsive to a failure of the server partition,
notifying the client partition of the failure of the
server partition;
recovering outstanding shared logical resources for
the server partition; and
restarting the server partition.
10. The method of claim 9, further comprising:
delaying for a period of time prior to the step of
recovering the outstanding shared logical resources for
the server partition.
11. A logical partitioned data processing system,
comprising:

a server partition;
at least one client partition; and
a hypervisor, wherein the hypervisor performs
functions and services for partitions to create and
enforce partitioning of the logical partitioned data
processing system,

wherein the server partition grants a logical
resource to the client partition, wherein the logical
resource corresponds to a physical resource, and wherein
a sharing client partition, within the at least one
client partition, maps the logical resource to the
physical resource.

12. The logical partitioned data processing system of
claim 11, wherein the hypervisor generates an identifier
for the logical resource.

13. The logical partitioned data processing system of
claim 12, wherein the identifier is unique within the
sharing client partition.

14. The logical partitioned data processing system of
claim 12, wherein the identifier cannot be used to access
the logical resource outside the sharing client
partition.

15. The logical partitioned data processing system of
claim 11, wherein the sharing client partition returns
the logical resource to the server partition.

16. The logical partitioned data processing system of claim 15, wherein the server partition rescinds the logical resource.

17. The logical partitioned data processing system of claim 11, wherein the server partition, responsive to a determination that the sharing client partition is incapable of gracefully returning the logical resource, performs a forced rescind operation.

18. The logical partitioned data processing system of claim 17, wherein the hypervisor, responsive to the forced rescind operation, prevents translation tables in the sharing client partition from containing references to a physical address of the logical resource.

19. The logical partitioned data processing system of claim 11, wherein the hypervisor, responsive to a failure of the server partition, notifies the sharing client partition of the failure of the server partition, recovers outstanding shared logical resources for the server partition, and restarts the server partition.

20. The logical partitioned data processing system of claim 19, wherein the hypervisor delays for a period of time prior to recovering the outstanding shared logical resources for the server partition.

21. A computer program product for managing shared resources in a logical partitioned data processing system, the computer program product comprising:

instructions for granting, by a server partition in the logical partitioned data processing system, a logical resource to a client partition in the logical partitioned data processing system, wherein the logical resource corresponds to a physical resource; and

instructions for mapping, by the client partition, the logical resource to the physical resource.